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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): **Kamil Paruch et al.** : Group Art Unit: To Be Assigned
Serial No.: **10/665,005** : Examiner: To Be Assigned
Filed: **09/19/2003** : Attorney Docket No. : OC01625K
For: **NOVEL IMIDAZOPYRAZINES AS CYCLIN
DEPENDENT KINASE INHIBITORS** :
X

**INFORMATION DISCLOSURE STATEMENT AND
SUBMISSION OF INTERNATIONAL SEARCH REPORT**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to Rule 56, it is requested that the documents listed on the accompanying PTO-1449 Form be considered and made of record in the above-identified patent application. Copy(ies) of these references ☒ are attached ☐ were filed in related application U.S. Serial No(s) _____ filed _____, respectively.

(b) No fee is believed due because:

- ☐ This Information Disclosure Statement is being filed within three (3) months of the filing date of the application.
- ☐ This Information Disclosure Statement is being concurrently filed with the above-identified application.
- ☐ This Information Disclosure Statement is being concurrently filed with a Request for Continued Examination (RCE).
- ☐ This Information Disclosure Statement is being filed prior to the mailing of a first Office Action on the merits.

(c) ☒ This Information Disclosure Statement is being filed before the mailing date of any final action, notice of allowance or an action that otherwise closes prosecution; and

☐ Each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or

☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement; or

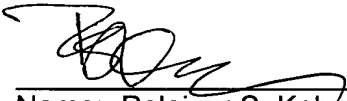
☒ The Commissioner is hereby authorized to charge the requisite fee listed on the attached Fee Transmittal Sheet.

- (d) ☐ This Information Disclosure Statement is being filed on or before the payment of the issue fee; and
- ☐ Each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement; and
- ☐ The Commissioner is hereby authorized to charge the requisite fee listed on the attached Fee Transmittal Sheet.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required for this Information Disclosure Statement, or credit any overpayment to Deposit Account No. 19-0365, Patent Case No. OC01625K.

Respectfully submitted,
SCHERING-PLOUGH CORPORATION

Dated: **March 26, 2004**
SCHERING-PLOUGH CORPORATION
Patent Department, K-6-1, 1990
2000 Galloping Hill Road
Kenilworth, NJ 07033-0530
Facsimile No.: (908) 298-5388

By: _____


Name: Palaiyur S. Kalyanaraman
Reg. No.: 34,634
Attorney of Record
Telephone No.: (908) 298-5068



PTO/SB/17 (10-03)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 180.00

Complete if Known

Application Number	10/665,005
Filing Date	09/19/2003
First Named Inventor	Kamil Paruch
Examiner Name	
Art Unit	
Attorney Docket No.	OC01625K

METHOD OF PAYMENT (check all that apply)☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None☒ Deposit Account:Deposit
Account
Number
Deposit
Account
Name

19-0365

Schering-Plough Corporation

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments☒ Charge any additional fee(s) or any underpayment of fee(s)☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) (\$ 0.00

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims	Fee from below	Fee Paid
Total Claims	-20** =	X	
Independent Claims	-3** =	X	
Multiple Dependent			

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$ 0.00

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity - Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	180.00
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 180.00

SUBMITTED BY

(Complete if applicable)

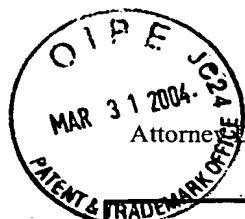
Name (Print/Type)	Palaiyur S. Kalyanaraman	Registration No. (Attorney/Agent)	34,634	Telephone	908-298-5068
Signature		Date	03/26/2004		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS

SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Attorney Docket No.: OC01625K

PTO/SB/92 (08-03)

(Modified)

Application No.: 10/665,005

Filing Date: 09/19/2003

Applicant: Kamil Paruch et al.

Title: "Novel Imidazopyrazines as Cyclin Dependent Kinase Inhibitors"

Certificate of Mailing under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents
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on 03/26/2004
Date


Signature

Palaiyur S. Kalyanaraman, Reg. No. 34, 634

Typed or printed name of person signing Certificate

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Documents enclosed:

Certificate of Mailing - 1pg.

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Fee Transmittal - 1pg. in duplicate

Information Disclosure Statement - 2pgs.

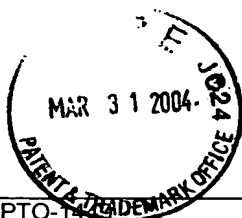
Copy of International Search Report - 5pgs.

PTO-1449 Form - 2pgs. in duplicate

References (11)

This collection of information is required by 37 CFR 1.8. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.8 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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FORM PTO-14 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use several sheets if necessary)</i>	ATTY. DOCKET NO.: OC01625K	APPLICATION NO.: 10/665,005
	APPLICANT: Kamil Paruch et al.	
	FILING DATE: 09/19/2003	GROUP:

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	AA	5,028,605 A	07/02/1991	Sablayrolles et al.			
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO
	AL	WO 02 060492 A	08/08/2002	WIPO				
	AM	WO 02 50079 A	06/27/2002	WIPO				
	AN							
	AO							
	AP							

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AQ	Viste, O. et al., "Imidazo(1,2-a)pyrazine Derivatives with Brochodilatory and Cyclic Nucleotide Phosphodiesterase Inhibitory Activities", <i>Bioorganic & Med. Chem.</i> , 7: 1059-1065 (1999).
AR	K. Zurbonsen et al., "Antiproliferative effects of Imidazo[1,2- α]pyrazine Derivatives on the Dami Cell Line", <i>Biochemical Pharmacology</i> , 54: 365-371 (1997).
AS	K. Zurbonsen et al., "Apoptotic effects of Imidazo[1,2- α]pyrazine Derivatives in the Human Dami Line", <i>European Journal of Pharmacology</i> , 320: 215-221. (1997).
AT	
AU	
AV	

EXAMINER	DATE CONSIDERED
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



FORM PTO-147	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO.: OC01625K	APPLICATION NO.: 10/665,005
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use several sheets if necessary)</i>		APPLICANT: Kamil Paruch et al.	
		FILING DATE: 09/19/2003	GROUP:

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	AW						
	AX						
	AY						
	AZ						
	BA						
	BB						
	BC						
	BD						
	BE						
	BF						
	BG						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO
	BH	WO 02/10162	02/07/2002	WIPO				
	BI							
	BJ							
	BK							
	BL							

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

BM	A. Sanderowicz et al., "Phase I Trial of Continuous Infusion Flavopiridol, a Novel Cyclin-Dependent Kinase Inhibitor, in Patients with Refractory Neoplasms", <i>J. Clin. Oncology</i> , 16 : 2986-2999 (1998).
BN	J. Vesely et al., "Inhibition of Cyclin-Dependent Kinases by Purine Analogues", <i>Eur. J. Biochem.</i> , 224 : 771-786 (1994).
BO	I. Meijer et al., "Biochemical and Cellular Effects of Roscovitine, a Potent and Selective Inhibitor of the Cyclin-Dependent Kinases cdc2, cdk2 and cdk5", <i>Eur. J. Biochem.</i> , 243 : 527-536 (1997).
BP	K. S. Kim et al., "Discovery of Aminothiazole Inhibitors of Cyclin-Dependent Kinase 2: Synthesis, X-ray Crystallographic Analysis, and Biological Activities", <i>J. Medicinal Chemistry</i> , 45 : 3905-3927 (2002)
BQ	
BR	

EXAMINER	DATE CONSIDERED
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.